CRT DATABASE

BARCO INDUSTRIES
VIDEO & COMMUNICATIONS

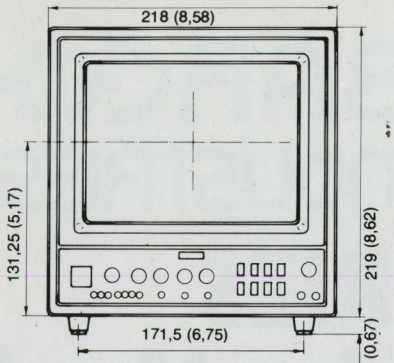
BARCO INDUSTRIES
High Quality Color Monitors

CM 22
CM 33HRC
CM 51HRC

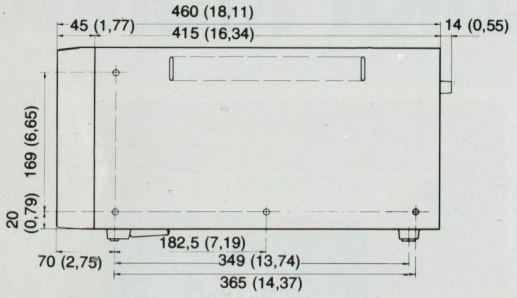
Real value for money

CRT DATABASE

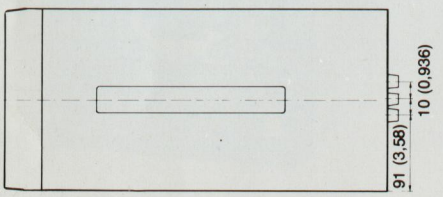
CABINET TYPE
FRONT VIEW



SIDE VIEW



TOP VIEW



INPUTS

- Internally terminated RGB: 75 Ohms 0.7 Vpp ± 6 dB, with sync on G: 1.0 Vpp ± 6 dB.
- 2 looped-through floating composite video inputs: 75 Ohms 1.0 Vpp ± 6 dB with internal termination switch. [B-input (= video 2) paralleled to J-plug.]
- External sync: floating 75 Ohms 4.0 Vpp ± 6 dB; Return loss: at least 30 dB.
  2 audio 0.78V ± 6 dB into about 100 kOhm.
  (audio-switching simultaneous with the switching of video input) (audio 2 on J-plug).
- audio 1 and video 1 inputs are available on plug outputs for recording purposes.

DISPLAY

- High resolution, fine ptich 0.3 mm, dot-type black matrix, in-line gun CRT, high focus voltage, 60° deflection angle, with autoconvergent yoke assembly.
- Useful screen area: 160 × 120 mm
- Switchable corners-in/normal scan.
- Geometry within ± 2% within a circle the diameter of which equals picture height. Outside ± 3%.
- Optical resolution: 4.7 MHz (– 20 dB) 4.1 MHz (– 12dB). 320 TV-lines (525/60 scanning).

MOUNTING

- The CM22 is delivered standard as a table top model.
- An optional tray is available to install two CM22's side-by-side in a 19 inch rack.
- Mounting with waveform monitor or vectorscope possible.

FRONT PANEL CONTROLS

- ON/OFF push button with lamp.
- Preset (knobs pushed) rotating controls for brightness, contrast, chroma, hue and (non-preset) audio volume.
- Input selection Video + audio 1, Video + audio 2, RGB(S).
- Comb filter decoding with sound volume control pulled out.
- Corners in display switch.
- RG off switch.
- HV scan delay (pulse cross).
- Remote input selection, with tally light warning, which enables input selection when properly wired-up from the rear remote socket.
- Headphone socket, 1/4 inch size, cuts loudspeaker when jack is plugged in.
- Screwdriver adjustment for color balance low and highlights.

POWER SUPPLY

120 VAC ± 15%, 45 to 65 Hz, max 70 VA.
The CM22 can be changed into a 220 VAC/12 VDC version by changing the jumpers on the swithed-mode power supply module.

OPTION

When line voltage fails the CM22 switches automatically to its DC input of 12 VDC (10 to 14V) max. 77 VA. When the DC voltage falls below 10 V or rises above 14 V a warning lamp on the front flashes and the monitor switches off.

DIMENSIONS

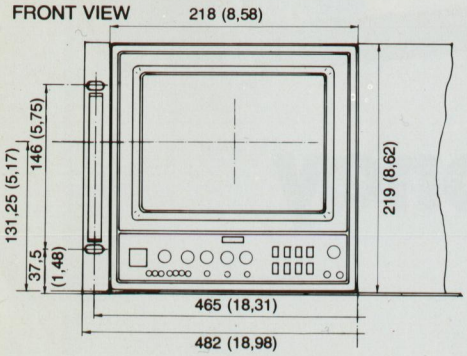
8.6 × 8.6 × 18.7 inch (H × W × D)

WEIGHT

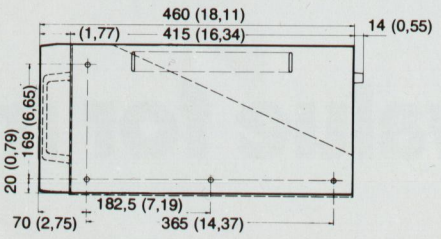
22 lbs net, export gross 29 lbs,
packing: 13 × 12 × 22 1/2 inch (H × W × D).

TYPICAL SPECIFICATIONS CM 22

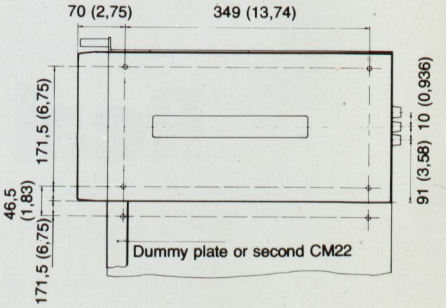
FRONT VIEW



RACK TYPE
SIDE VIEW



TOP VIEW



DIMENSIONS MM (inch)

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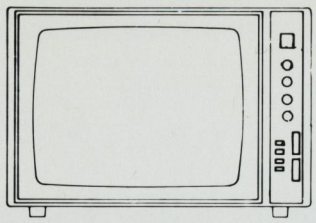
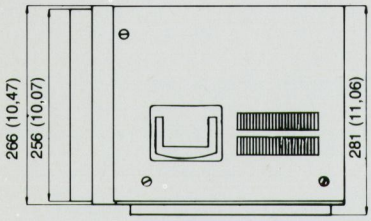
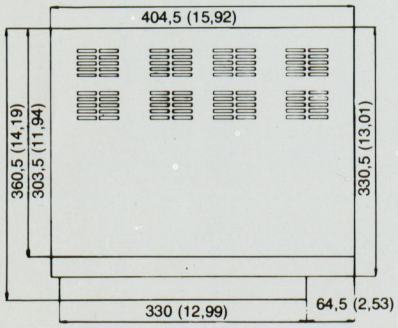
14" CABINET TYPE
FRONT VIEW



SIDE VIEW



TOP VIEW



RGBS + VIDEO INPUT MODULE:
RGB 0,7 Vpp + 6 dB non composite.
RGB 1 Vpp + composite (sync on green).
Ext sync 4 Vpp ± 6 dB neg. going.
Video CVBS 1 Vpp.
All inputs BNC to BNC loop through.
75 Ohm termination switch.
Return loss more than or equal to 30 dB.
Switching between internal (sync on green) and external sync.

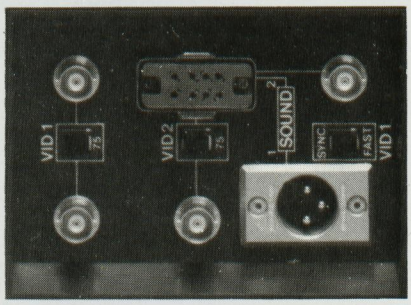
CONTROLS ON FRONT PANEL
On-off switch
Preset controls for Brightness, Contrast, Chrominance, Hue
Video 1/2 switching.
or Video - RGBS switching (dependant on version).
RG-off switch.
Size (under-normal scan switch).
Horizontal, vertical scan delay, pulse cross sequential switching.

BEHIND COVER: RGB cut-off, RGB Gain.

ON THE RIGHT SIDE
Volume.
The CM 33 HRC is available in CVBS Video version (two video inputs).
or RGBS and CVBS Video version.
When equipped with RGBS input unit there is no sound facility available.

DIMENSIONS:
10.47 × 15.94 × 15.20 inch (H × W × D)
6 units rackmount
Carton dimensions:
22.83 × 19.69 × 16.24 inch (H × W × D)

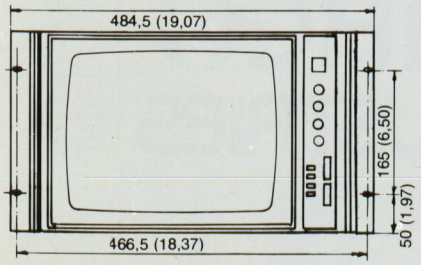
WEIGHT
37 lbs net
48 lbs export gross



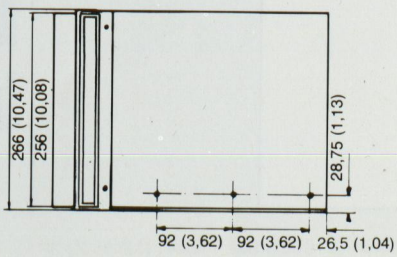
VIDEO INPUT BOARD

TYPICAL SPECIFICATIONS CM 33 HRC

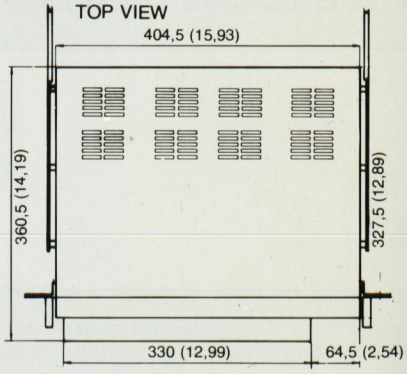
14" RACK MOUNT
FRONT VIEW



SIDE VIEW



TOP VIEW



DIMENSIONS MM (inch)

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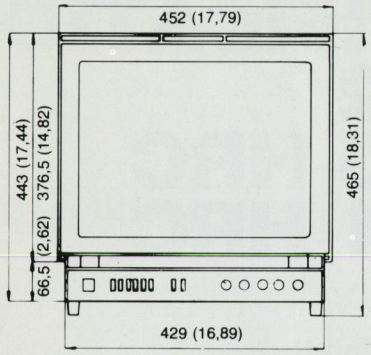
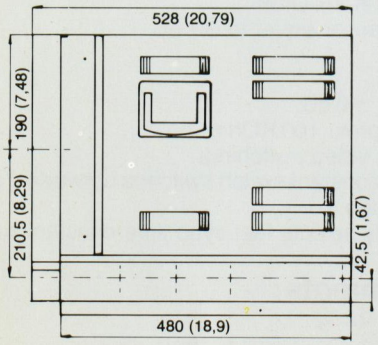
19" CABINET TYPE
FRONT VIEW



SIDE VIEW



RGBS + VIDEO INPUT MODULE:
RGB 0,7 Vpp ± 6 dB non composite.
RGB 1 Vpp + composite (sync on green).
Ext sync 4 Vpp ± 6 dB neg. going.
Video CVBS 1 Vpp.
All inputs BNC to BNC loop through.
75 Ohm termination switch.
Return loss more than or equal to 30 dB.
Switching between internal (sync on green) and external sync.

REMOTE OUTLET:
enables to select
Vid 1, 2 and RGB input when remote switch is pushed.
tally light switching.

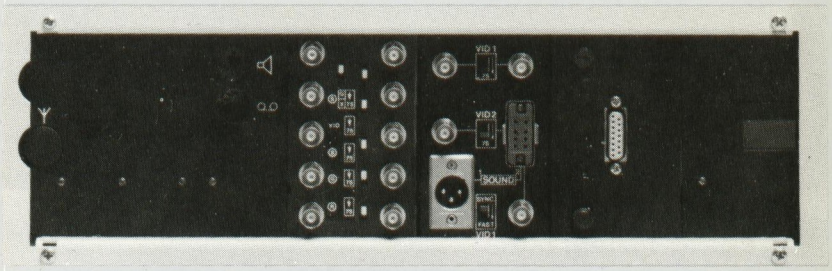
CONTROLS ON FRONT PANEL:
On-off switch.
Video 1/2, RGBS switching
Remote control.
Color Killer.
Fast/slow sync switch.
RG-off switch
Size (under-normal scan switch)
Horizontal, vertical scan delay, pulse cross sequential switching
Volume. Preset controls for Brightness, Contrast, Chrominance, Hue.

When equipped with RGBS input unit, the CM 51 HRC features 3 CVBS inputs and RGB + Sync input.

IN DRAWER:
RGB cut-off
RGB 1 gain
RB 2 gain
Color temp switch
RGB off switcher

DIMENSIONS:
17.72 × 18.31 × 21.85 inch (H × W × D)
10 units rackmount
Carton dimensions:
24.02 × 28.94 × 23.23 inch (H × W × D)

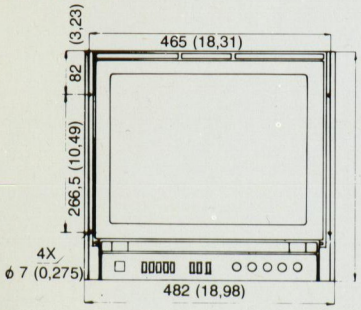
WEIGHT
net: 77 lbs
Export brut: 90 lbs (Double carton)



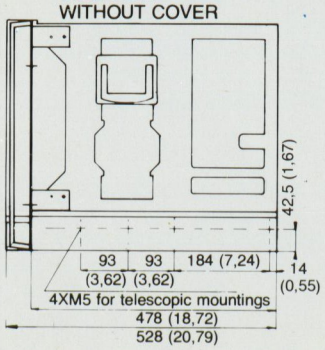
VIDEO AND RGBS INPUT BOARDS

TYPICAL SPECIFICATIONS CM 51 HRC

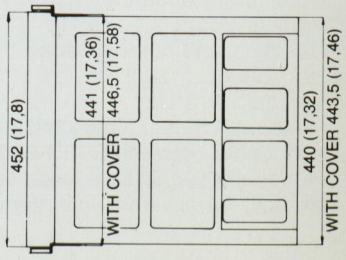
19" RACK MOUNT TYPE
FRONT VIEW



SIDE VIEW
WITHOUT COVER



TOP VIEW



DIMENSIONS UNIT MM (inch)

CRT DATABASE

COMMON SPECIFICATIONS CM 22 CM 33 HRC CM 51 HRC

CM series Color Monitors are designed for broadcast and non broadcast applications where a good picture quality is required. Using a high resolution tube provides an interference free and a fully resolved picture. The modular design allows easy and quick service.
The switch mode power supply allows stable performance in areas where the power line voltage may vary.

The sets are equipped with audio amplifier and built-in speaker to extend the range of control facilities.

Display:
High Resolution, fine pitch dot type black matrix, auto convergent tube deflection yoke assembly. High Focus Voltage Bipotential, In-Line Electronic Gun.

Resolution
(valid for 525 lines/60 Hz interlaced scanning system)

In Line Gun	9"	14"	20"
Hor. Res. – 12 dB	4.1 MHz	4.9 MHz	6.8 MHz
Hor. Res. – 20 dB	4.7 MHz	5.7 MHz	7.8 MHz
TV Lines	320	340	540
Pitch	0,30 mm	0,43 mm	0,43 mm

Manual degaussing (in addition to automatic degaussing)

Ordering Information:

CM 22 NTSC 3.58
CM 22 NTSC 3.58 / 12 VDC
CM 33 HRC NTSC 3.58
CM 33 HRC NTSC 3.58 RGB
CM 51 HRC NTSC 3.58
CM 51 HRC NTSC 3.58 RGB

The above apparatus can be changed into a 220 Volt version:
- CM 22 by desoldering and resoldering jumpers on the SM-power supply module
- CM 33 by exchanging mains input module C 76 11 03 by C 76 11 02
- CM 51 HRC by exchanging mains input module C 76 10 86 by C 76 10 85.

Scanning format:
- Factory adjusted 4 to 3 aspect ratio underscan.
- Normal scan switchable.

Geometry:
Within a central area bounded by a circle whose diameter equals picture height ±2%.
Outside: ±3%.

RGB Amplifier Performance:
15 kHz to 7 MHz + 1dB to – 3dB with gradual roll-off.

Synchronisation:
Horizontal frequency: 15750 Hz
Vertical frequency: 60 Hz
Catching and holding range.
Horizontal: ± 700 Hz
Vertical: ± 3 Hz
Horizontal Sync : time constant
switchable between 2 mS and 7 mS
Horizontal flybacktime: less than 10 µS
Vertical flybacktime: less than 1 µS

Video module input

VIDEO 1: CVBS 1 Vpp ± 6 db.
BNC to BNC loop through.
Switchable termination 75 Ohm.
Return loss more than or equal to 30 dB.

VIDEO II: CVBS 1 Vpp ± 6 dB.
BC to BNC 8 pole J plug loop through.
Switchable termination 75 Ohm.
Return loss more than or equal to 30 dB.

Audio 1 and 2 input.
780 mV for full drive ± 6 dB.
Input impedance approx. 100 KOhm.
Inputs switched with video switching.
Fast-slow sync time constant switch switches between 2 and 7 mS time constant for Video 1.
Video 2 automatically selects fast sync time constant mode.

Power requirements:
120 V AC – 15% + 12%
45 Hz to 65 Hz.

Power consumption:
14" and 20":
With white field and beam current limiter working 135 W.
With standard test pattern and controls to average position 95 W.
Max. power consumption 135 W

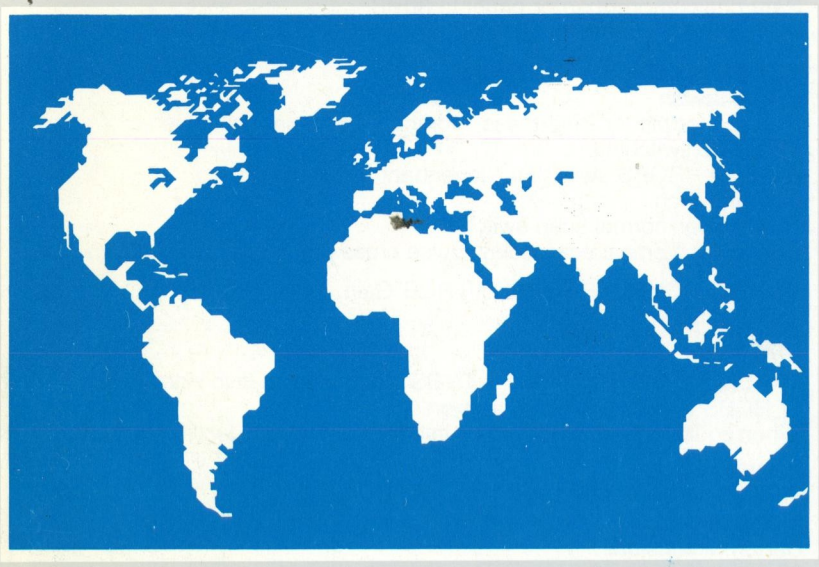
9":
Max 70 W on 120 V
Max 77 W on 14 VDC
Average 60 W

Environment:
32°F to 113°F ambiant temperature
Relative humidity up to 95%.
Normal performance up to 10000 ft altitude.

CRT DATABASE

BARCO INDUSTRIES VIDEO & COMMUNICATIONS WORLDWIDE REPRESENTED

(Sales and service)



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VIDEO & COMMUNICATIONS

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